ADDITIONAL FEE:

Please charge any insufficiency of fee, or credit any excess, to Deposit Account No. 50-0427.

R E M A R K S

The Office Action issued August 24, 2004 has been received and its contents have been carefully considered.

Submitted herewith for the approval of the Examiner are copies of Figs. 1-5 of the drawings, with proposed changes indicated in red. These proposed changes supercede the proposed changes to the drawings submitted with applicants' Amendment filed June 10, 2004. Upon careful review, applicants noted a number of inconsistencies in these prior amendments, most notably of which were the duplication of certain reference numerals. For example, the transition relay was designated with the reference numeral 17, although this reference numeral was also used to designate one of the motor contactors.

Also, the motor contactors in Figs. 4 and 5 were designated with reference numerals 1-17; these repeated reference numerals 1-16 that were used to designate other elements in Figs. 1-3.

The motor contactors have now been consistently designated in Figs. 4 and 5 with the reference numerals 17-23.

Fig. 1 has also been amended to correct the error for reference numeral 7, which designates the support for the replaceable batteries 3.

The specification of this application has been thoroughly reviewed, and revised where necessary, to refer to the new reference numerals.

In addition, as the Examiner requested, the Summary of the Invention has been amended to describe the subject matter of claims 5-7.

Claim 5 has been amended to incorporate the subject matter of claims 6 and 7. Claim 5 now recites that both the "first and second" DC electric series motors include a "shunt field winding" which is connectable to the power leads L1 and L2 when the drive apparatus is in a "third mode" to operate the motors in the highest speed range.

Finally, claim 15 has been amended to recite that the fuel cell is "connected to a replaceable source of hydrogen." This amendment finds support on page 4 of the specification, as originally filed.

Claims 5-7, as previously submitted, stand rejected under 35 USC §102(b) as being anticipated by the U.S. Patent No. 4,363,999 to Preikschat. It is believed that claim 5, as now presented, distinguishes patentably over Preikschat because, whereas the motors in Preikschat require their field windings to be energized at all times, with the present invention, the electric shunt field windings are energized only in mode 3. In modes 1 and 2, which produce the low and medium speed ranges, the shunt field windings are disconnected from the power source.

As explained in Column 7, lines 52-57, of Preikschat and as illustrated in Fig. 5, each of the motors include a commutation circuit COM, a three phase armature winding AM and a field winding FLD.

As explained thereafter, in Column 9, line 8 through Column 10, line 27, a voltage is continuously applied to each of the field windings. This voltage is controlled by connecting them all in series, all in parallel or in a series/parallel combination across the power buses 54 and 56.

Because of the nature of the motor, it simply does not produce any power at all if the field winging is not excited. As explained in Column 4, lines 62-66:

> "In summary, the mechanical energy delivered by each motor (in the form of mechanical rotation of its output shaft) is varied by a microprocessor 32 through control of the voltage applied and the field current in the motor".

In contrast, the present invention utilizes a pair of motors which operate as series motors in modes 1 and 2 but become "compound motors" in mode 3, when their shunt field windings are connected to the source of power. When these windings are energized in this mode, the speed of the motors is increased.

The U.S. Patent No. 5,701,062 to Barrett, and the Patent No. 6,586,668 to Shugar et al., which were applied by the Examiner in combination with Preikschat, do not provide the teaching which is missing from Preikschat. Neither Barrett nor Shugar et al. disclose a motor control system which operates in the manner now recited in applicant's claim 5. Barrett, which was applied against claim 8, does disclose two motors connected in tandem to a drive shaft, and Shugar et al. does disclose a photovoltaic roof assembly for an electric golf cart. However, these references

contain no disclosure at all as to how the electric motors are powered.

Since all of the issues raised in the outstanding Office Action have been resolved by this Amendment, this application is believed to be in condition for immediate allowance. A formal Notice of Allowance is accordingly respectfully solicited.

Respectfully submitted,

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I hereby certify that this correspondence is being deposited with the United States Postal Services as first class mail in an envelope addressed to: Commissioner for Patents, Alexandria, VA 22313-1450

on Oct. 26, 2004

MILDE & HOFFBERG, LLP

By _____

Date Oct. 26, 2004